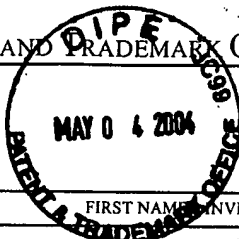




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APPLICATION NO.	FILING DATE	FIRST NAME INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,841	11/08/2000	Sharon Mantin	6727/OH903	3186

7590
Darby & Darby PC
805 Third Avenue
New York, NY 10022

02/27/2004

EXAMINER

HA, YVONNE QUY M

ART UNIT	PAPER NUMBER
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2664

DUE: MAY 27, 2004
Docketed on 3/2 by JP for
Docketed without file ☐

DATE MAILED: 02/27/2004

8-27-04

Attorney _____

Please find below and/or attached an Office communication concerning this application or proceeding.

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REQUIRED

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MAY 12 2004

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Office Action Summary

Application No.

09/708,841

Applicant(s)

SHARON MANTIN

Examiner

Yvonne Q. Ha

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

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Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11-08-00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3. 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: a management station coupled to master shelf of claim 1 is not on the drawing. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: The Co-pending application 09/708845 must be included at the beginning of the Specification section. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, see "the master shelf management messages" of claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2664

5. Claims 1-5, 14-21, 30, 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaplan et al. (US Patent 6,680,904).

Referring to claims 1 and 17, Kaplan discloses communication access apparatus (figure 3), comprising: a master shelf, comprising a master switching unit linked to communicate with a high-speed network (figure 5, references 31, 33); a plurality of slave shelves arranged in a given system topology with respect to the master shelf (figure 5, references 31, 33, 34), each of the slave shelves comprising ports configured to serve network subscribers (figure 3, reference 28), and further comprising a slave switching unit (figure 5, references 34), coupled to communicate with the master switching unit and to multiplex among the ports so as to provide the subscribers with access to the high-speed network (col. 7, lines 33-65; col. 8, lines 31-52; figure 5), and to receive from the master shelf management messages that are addressed to an internal network-layer address that is determined uniquely for each of the slave shelves based on the topology (col. 8, lines 53-65, distribution of packets through chain with respective ports); and a management station (i.e. pre-switch, col. 9, lines 1-5, acting as pass through; figure 6, reference 92), coupled to convey the management messages to the master shelf over a management network in which at least some of the slave shelves share a common external network-layer address (col. 8, lines 58-61, i.e. network interface switching address) by mapping the internal network-layer address of each of the shelves (col. 8, lines 53-65, figure 6, references 94, 96, 98) to a respective transport-layer address (col. 8, lines 56-65, switching address correspond to a switch port which correspond to UTOPIA address).

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Referring to claim 2, Kaplan discloses all aspects of the claimed invention and further teaches the master shelf and the plurality of slave shelves belong to a Digital Subscriber Line Access Multiplexing (DSLAM) system (col. 6, lines 11-21, figure 3).

Referring to claims 3 and 19, Kaplan discloses all aspects of the claimed invention and further teaches the high-speed network comprises an Asynchronous Transfer Mode (ATM) network (col. 6, lines 11-21, figure 3).

Referring to claims 4 and 20, Kaplan discloses all aspects of the claimed invention and further teaches the master and slave-switching units communicate over ATM lines (col. 7, lines 11-21, pre-switch address is implemented with GFC portion to accommodate ATM).

Referring to claims 5 and 21, Kaplan discloses all aspects of the claimed invention and further teaches the management network comprises an Internet Protocol (IP) network, which is operative over the ATM lines using an IP over ATM protocol (col. 4, lines 3-6).

Referring to claim 14, Kaplan discloses all aspects of the claimed invention and further teaches each of the slave shelves is adapted to determine its respective position in the topology and to recognize its internal network-layer address responsive to its determined position (figure 6, reference 94 via port 0, chain 39; reference 96 via port 1, chain 37).

Referring to claims 15 and 30, Kaplan discloses all aspects of the claimed invention and further teaches the topology comprises a plurality of daisy chains, over which the slave switching units are coupled to communicate with the master switching unit (col. 8, lines 53-65; figure 6).

Referring to claims 16 and 31, Kaplan discloses all aspects of the claimed invention and further teaches the internal network-layer address of each of the slave shelves is determined uniquely by an identifying number of the chain in which the shelf is located and a position of the

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shelf in the chain (col. 8, lines 53-65; figure 6, reference 94 via port 0, chain 39; reference 96 via port 1, chain 37).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6-13, and 22-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplan et al. (US Patent 6,680,904) in view of Roy (US Patent 6,310,862).

Referring to claims 6 and 7, Kaplan discloses all aspects of the claimed invention and further teaches the external network-layer address (figure 6, reference 102, i.e. network physical layer to external network) comprises a single IP address that is common to the master shelf (figure 6, references 90, 92 of master shelf) and to all of the slave shelves (figure 6, reference 94, 96, 98 daisy chain to slaves). Kaplan does not expressly disclose the IP address of master shelf for external network address. However, Roy discloses a functional entity provides conversion between UDP and IP and IP and ATM of services that are required for traffic sent from the ATM network to cable networks (col. 9, lines 63-67; col. 10, lines 1-20). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of bi-directional of daisy chain network access ports to Roy multi-services protocol conversion of UDP/IP and ATM. Since the master unit has network interface port to an external network, this would implies that in order to interface with an external network, such as IP network, an IP address is required for external routing.

Referring to claims 8, 9, 24 and 25, Kaplan discloses all aspects of the claimed invention but failed to teach the respective transport-layer address to which the management station maps the internal network-layer address comprises a session-layer port. However, Roy discloses protocol architecture for end-to end communications for transferring control and signaling messages between multimedia computers (MPC), ATM modems of premises network, head-end stations, and ATM network based servers, including protocols conversions and transport, signaling stacks (col. 13, lines 1-10, figure 10; figures 5,6 of protocol stacks). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of bi-directional of daisy chain network access ports to Roy multi-services protocol conversion of UDP/IP and ATM. To employ a powerful multimedia control and signaling scheme that shares the bandwidth among multiple users in dispersed locations, an integrated call control/setup would require as shown by Roy where a single access bridge server is provided in each ATM network domain, and is used to bridge multimedia traffic over the cable network for each incoming/outgoing call in that access network domain. The concept of having one bridge (i.e. a master unit to interface to external network and multiple slave units are internally to the network) would guarantee bandwidth and reduce a large amount of excess bandwidth.

Referring to claims 10 and 26, Kaplan discloses all aspects of the claimed invention but failed to teach the management station is further adapted to map each internal network-layer address of each of the shelves to multiple different session-layer ports, depending on a presentation-layer protocol used in the management messages. However, Roy discloses signaling, transport and network protocols are used in ATM cable modems of head-end stations (figure 10; col. 13, lines 28-64); the transferring of audio, video signals between multimedia

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computers (MPC) and central bridge server via ATM modems and LAN hub of ATM WAN (col. 13, lines 52-67; col. 14, lines 1-40); bandwidth computation process based on different criteria of incoming calls related to ATM access domain and from which ATM network server in order to route the call via setup message and signaling control (col. 15, lines 30-67, col. 17, lines 1-65). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of bi-directional of daisy chain network access ports to Roy multi-services protocol conversion of UDP/IP and ATM. To employ a powerful multimedia control and signaling scheme that shares the bandwidth among multiple users in dispersed locations, an integrated call control/setup would require as shown by Roy where a single access bridge server is provided in each ATM network domain, and is used to bridge multimedia traffic over the cable network for each incoming/outgoing call in that access network domain. The signaling, transport and network protocols are used in ATM cable modems of head-end stations; the transferring of audio, video signals between multimedia computers (MPC) and central bridge server via ATM modems and LAN hub of ATM WAN. The concept of having one bridge (i.e. a master unit to interface to external network and multiple slave units are internally to the network) would guarantee bandwidth and reduce a large amount of excess bandwidth.

Referring to claims 11, 12, 13, 27, 28, and 29, Kaplan discloses all aspects of the claimed invention but failed to teach the internal network-layer address comprises an internal IP address, and wherein the master-switching unit is adapted to map the session-layer port in the management messages to the internal IP address. However, Roy discloses protocol architecture for end-to end communications for transferring control and signaling messages between multimedia computers (MPC), ATM modems of premises network, head-end stations, and ATM

Art Unit: 2664

network based servers, including protocols conversions and transport, signaling stacks (col. 13, lines 1-10, figure 10; figures 5,6 of protocol stacks). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of bi-directional of daisy chain network access ports to Roy multi-services protocol conversion of UDP/IP and ATM. To employ a powerful multimedia control and signaling scheme that shares the bandwidth among multiple users in dispersed locations, an integrated call control/setup would require as shown by Roy where a single access bridge server is provided in each ATM network domain, and is used to bridge multimedia traffic over the cable network for each incoming/outgoing call in that access network domain. The concept of having one bridge (i.e. a master unit to interface to external network and multiple slave units are internally to the network) would guarantee bandwidth and reduce a large amount of excess bandwidth.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Civanlar et al. (US Patent 6,339,594) discloses WAN based gateway
- Chiu et al. (US Patent 6,597,689) discloses SVC signaling system
- Raj et al. (US Patent 6,628,649) discloses providing redundant routing in a switched network device

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne Q. Ha whose telephone number is 703-305-8392. The examiner can normally be reached on Monday-Friday 7a.m.-4p.m. Eastern.

Art Unit: 2664

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ajit Patel can be reached on 703-308-5347. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

YQH


Ajit Patel
Primary Examiner

Notice of References Cited

Application/Control No.

09/708,841

Applicant(s)/Patent Under
Reexamination
SHARON MANTIN

Examiner

Yvonne Q. Ha

Art Unit

2664

Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,680,904 B1	01-2004	Kaplan et al.	370/217
	B	US-6,310,862 B1	10-2001	Roy, Radhika R.	370/260
	C	US-6,597,689 B1	07-2003	Chiu et al.	370/354
	D	US-6,339,594 B1	01-2002	Civanlar et al.	370/352
	E	US-6,628,649 B1	09-2003	Raj et al.	370/360
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

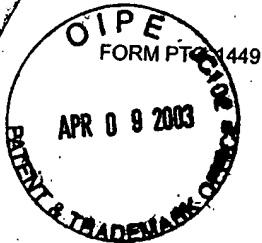
FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



U.S. DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE

SHEET 1 OF 1
(REV. 7-80)

LIST OF REFERENCES CITED BY APPLICANT

(Use Several Sheets if Necessary)

DOCKET NO.:
APPLICANT:

6727/0H903
Sharon MANTIN

SERIAL NO: 09/708,841
FILING DATE: November 8, 2000
CONFIRMATION NO:

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U.S. PATENT DOCUMENTS

<u>*EXAMINER INITIALS</u>	<u>DOCUMENT NUMBER</u>	<u>DATE</u>	<u>NAME</u>	<u>CLASS</u>	<u>SUBCLASS</u>	<u>FILING DATE</u>
yout	1. 6,219,354	Apr. 2001	Fink et al.			
yout	2. 6,181,715	Jan. 2001	Phillips et al.			
yout	3. 6,424,657	Jul. 2002	Voit et al.			

FOREIGN PATENT DOCUMENTS

<u>*EXAMINER INITIALS</u>	<u>DOCUMENT NUMBER</u>	<u>DATE</u>	<u>COUNTRY</u>	<u>CLASS</u>	<u>SUBCLASS</u>	<u>TRANSLATION</u> YES NO
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OTHER REFERENCES

(INCLUDING AUTHOR, TITLE DATE, PERTINENT PAGES, ETC.)

*EXAMINER
INITIALS

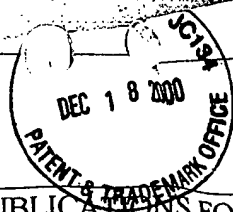
EXAMINER: yvonne

DATE CONSIDERED: 2/17/04

*EXAMINER:

Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Colb)

ATTY DOCKET NO.
6727/0H903SERIAL NUMBER
09/708,841LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANTS' INFORMATION DISCLOSURE
STATEMENTAPPLICANT
Sharon MANTINFILING DATE
November 08, 2000GROUP ART UNIT
N/A

U.S. PATENT DOCUMENTS

Examiner's Initials		DOCUMENT NO.	DATE	NAME	CLASS	SUB	FILING DATE
	AA						
	AB						
	AC						
	AD						
	AE						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB	TRANS- LATION
	AF						
	AG						
	AH						

OTHER ART (Including Author, Bills, Pertinent Pages, Etc.)

<i>you</i>	AI	IETC RFC 2225, April 1998, pp. 1-22.
<i>↓</i>	AJ	IETC RFC 2631, June 1999, pp. 1-11.
<i>↓</i>	AK	IETC RFC 1901, January 1996, pp. 1-7.
<i>↓</i>	AL	IETC RFC 1694, February 1999, pp. 1-67.

EXAMINER: *Yvonne Ha*DATE CONSIDERED: *2/17/04*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.